



## Grades K–2

### 3.5.K-2.AA Technology and Engineering: Nature and Characteristics of Technology and Engineering

**Students who demonstrate understanding can** *demonstrate that creating can be done by anyone.*

**Clarifying Statement:** Using technology and engineering tools and techniques, anyone can design or improve things to enhance their lives. Creation of new knowledge, approaches, and inventions can occur through either individual or collaborative efforts. Even young children can view themselves as creators.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<b>Asking Questions and Defining Problems</b>  Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	<b>Defining and Delimiting Engineering Problems</b> <ul style="list-style-type: none"> <li>A situation that people want to change or create can be approached as a problem to be solved through engineering.</li> <li>Asking questions, making observations, and gathering information are helpful in thinking about problems.</li> <li>Before beginning to design a solution, it is important to clearly understand the problem.</li> </ul>	<b>Creativity</b> <ul style="list-style-type: none"> <li>Learns that humans create products and ways of doing things.</li> </ul> <b>Making and Doing</b> <ul style="list-style-type: none"> <li>Learns to use tools and materials to accomplish a task.</li> </ul>

**Pennsylvania Context:** N/A

**Pennsylvania Career Ready Skills:** Demonstrate respect for the uniqueness of others.

## Connections to Other Standards Content and Practices

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
<b>PA Core Standards: Reading and Writing in Science and Technical Areas</b>	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
<b>PA Core Standards and Practices: Math</b>	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.



**Science, Technology &  
Engineering, and  
Environmental Literacy &  
Sustainability Academic  
Standards**

N/A